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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/600,307

06/19/2003

John I. Alioto

1079

6180

7590

10/28/2004

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EXAMINER

TRIEU, VAN THANH

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/600,307	<b>Applicant(s)</b> ALIOTO ET AL.	
	<b>Examiner</b> Van T Trieu	<b>Art Unit</b> 2636	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 June 2003.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-40 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/15/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 4-11, 14-21, 24-31 and 34-40 are rejected under 35 U.S.C. 102(b) as being anticipated by **Armistead** [US 5,838,759].

Regarding claim 1, **Armistead** discloses an inspection system including an X-ray source 14, 113 or 157 generates of neutron-induced gamma ray spectroscopy and a plurality of detectors 24 or 158 for detecting of fissile or radioactive material in cargo containers 12 being hoisted by a robotic grip 155 on a straddle carrier vehicle 151. The X-ray source 14, 113 or 157 and detectors 24, 158 are located on a moving crane vehicle 111, 151 that operates to detect the presence of the radioactive material in the cargo containers. The outputs of the X-ray detectors 24, 158 are feed to a computer with programming software and codes associated with the gamma ray energy analyzer 34, identifier 36, data memory and a display 36. The target identifier 36 identifies of radioactive materials based on the detected output signals compared with the predetermined threshold energy for the photo-neutron reaction. The X-ray image always take image signals of the target material in each of the container 12 and the target material will be displayed If the target material is exceeding threshold energy

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level, in which those gamma rays are like the fingerprints of the elements in the objects, see Figs. 1-4, abstract, col. 2, lines 38-67, col. 3, lines 1-8, col. 5, lines 17-67, col. 6, lines 1-60, col. 7, lines 47-67, col. 8, lines 1-43 and col. 9, lines 7-46.

Regarding claim 4, all the claimed subject matters are cited in respect to claim 1 above, and including the codes that compares, which reads upon the X-ray image processing electronics 28 constitute a computer, a memory and a target acquisition electronics 30 for comparing of detected gamma ray data with a plurality of different gamma ray fingerprints stored in the electronic database 30 to identify of the target object, see Figs. 1 and 2, col. 1, lines 46-47, col. 3, lines 1-35, col. 5, lines 30-67 and col. 6, lines 1-60.

Regarding claim 5, all the claimed subject matters are cited in respect to claim 4 above, wherein the third database reads upon the electronic database 30.

Regarding claim 6, all the claimed subject matters are cited in respect to claim 5 above, wherein the second database reads upon the electronic database 30.

Regarding claim 7, all the claimed subject matters are cited in respect to claim 5 above, wherein the second database reads upon the electronic database 30.

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Regarding claim 8, all the claimed subject matters are cited in respect to claim 7 above, wherein the commodity ID (the target object ID, see col. 5, lines 41-42 and col. 6, lines 45-60).

Regarding claim 9, all the claimed subject matters are cited in respect to claim 4 above.

Regarding claim 10, all the claimed subject matters are cited in respect to claim 9 above, see Fig. 2.

Regarding claim 11, all the claimed subject matters are cited in respect to claims 1 and 4 above.

Regarding claims 14-20, all the claimed subject matters are cited in respect to claims 4-11 above, respectively.

Regarding claim 21, all the claimed subject matters are cited in respect to claim 11 above.

Regarding claims 24-30, all the claimed subject matters are cited in respect to claims 4-10 and 21 above, respectively.

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Regarding claim 31, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claims 34-40, all the claimed subject matters are cited in respect to claims 4-10 and 31 above, respectively.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 2, 3, 12, 13, 22, 23, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Armistead** [US 5,838,759].

Regarding claim 2, all the claimed subject matters are cited in respect to claim 1 above, but **Armistead** fails to disclose the code that subtracts predetermined background data from the raw digital data to develop the digitized gamma ray data. However, **Armistead** suggests that it is important to carefully shield the detectors 24 and to gate the data acquisition so that the background in the gamma ray detectors is reduced to a level that does not obscure the signal. There are several standard techniques for performing this gating, so that even with the large X-ray flash, the detection system recovers between a few microseconds to ten of microseconds. This recovery is sufficient to measure the delayed thermal neutron-capture signals. The energy analyzer 34 received the signal to look for energy peaks characteristic of neutron interactions with particular atoms. The target identification electronics 36 associates the energy found in the analyzer 34 with particular target substances and counts the number of sample signals to output display 36, see Figs. 1 and 2, col. 6, lines 21-60. Therefore, it would have been obvious to one skill in the art to recognize that the gating technology and associated target identification to identify of the neutron radiation material in the target object by minimizing, reducing or eliminating of the background data in the gamma ray from the detected intensity and spectrum data of the radiation materials.

Regarding claim 3, all the claimed subject matters are discussed in respect to claim 2 above, and including the raw digital data as at least one of intensity data and energy spectrum data, see col. 3, lines 9-32.

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Regarding claims 12 and 13, all the claimed subject matters are discussed in respect to claims 2, 3 and 11 above.

Regarding claims 22 and 23, all the claimed subject matters are discussed in respect to claims 2, 3 and 21 above.

Regarding claims 32 and 33, all the claimed subject matters are discussed in respect to claims 2, 3 and 31 above.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Bartle** discloses an apparatus and method detecting the presence of a number of substances such as explosives or drugs in a container at an airport. The containers on a conveyor are irradiated with fast neutron and gamma source radiation. [US 5,479,023]

**Husseiny et al** discloses a detector for detection of concealed explosive, drugs and contraband using X-ray image and powder pattern techniques and ultrasonic. The X-ray transmission is used to segregate dense baggage and cargo, which are inspected by X-ray backscatter imaging to identify suspicious objects. [US 5,692,029]

**Abul-Faraj et al** discloses a radiation monitoring system for crates and containers, and segregates same according to the predetermined levels of radiation concentration

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therein. The scanning analyzer includes gamma detectors, a shield, a liner, sealed water tight and a multi-channel analyzer with associated electronics and ancillaries.

[US 5,416,330]

**Caldwell et al** discloses a technique for correcting gamma ray intensities detected to account for variation in attenuation effect with energy. [US 6,791,093]

**Alioto et al** discloses a fissile or radioactive material detection device mounted to the hoist attached such as the shipping container is being engaged. [US 6,768,421]

4. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

A handwritten signature in black ink, appearing to read 'Van Trieu', with a long, sweeping horizontal line extending to the right.

**Van Trieu**  
**Primary Examiner**  
**Date: 10/22/04**